# Module B:

# Nutrition & Health Assessment

# Table of Contents

# Overview

**Introduction**

This module will help you to understand how to assess the nutrition and health status of WIC participants.

**Learning Objectives**

After completing this module the Nutrition Assistant will be able to:

- define the terms anthropometric*, biochemical, clinical, and dietary assessments,
- list common sources and methods for gathering anthropometric, biochemical, clinical, and dietary data,
- describe correct measurement techniques,
- assess several diets using the 24-hour recall form and the *Food Guide Pyramid*,
- describe the Nutrition Intervention Triage System
- describe conditions such as anemia, obesity, lead poisoning, homelessness, drug abuse, smoking and domestic violence and suggestions to address these.

** Words that you may not know are **underlined**. Definitions for these words can be found in the **Glossary** at the end of the module. (Note: Words are only underlined the first few times they appear in the text.)*

# Assessment

**Definition**

Assessment is the evaluation of the WIC participant's nutrition or health status.

**Type of Assessment**

There are 4 different types of assessments that WIC staff use to determine if an applicant has a nutritional risk. They are:

- anthropometric,
- biochemical,
- clinical, and/or
- dietary.

You will use these assessments at enrollment and recertification appointments.

**Description of Assessments**

The chart on the next 2 pages briefly describes these 4 assessments.

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# Assessment (continued)

## Description of Assessments

**Anthropometric:**
- Evaluates a person's body, such as her/his:
  - height,
  - weight, and
  - circumference of the head, waist, arms or legs (*not used in WIC*).

- ***A health care provider must have taken measurements no more than 60 days before the WIC appointment.***

**Biochemical:**
- Evaluates what is in a person's blood, such as:
  - iron,
  - sugar, and
  - lead.

- ***The blood test must have been taken no more than 90 days before the WIC appointment.***

**Clinical:**
- Evaluates a person's:
  - health history,
  - current medical condition, and
  - health/lifestyle habits.

- You will gather information from:
  - medical charts,
  - referrals from health care providers,
  - forms filled out by the applicant,
  - well-baby books,
  - interviews of the applicant or parent/caregiver, and/or
  - observations of applicant (appearance, interactions with others).

**Dietary:**
- Identifies what the applicant usually eats and drinks using:
  - a diet history/24-hour recall,
  - food record/diary, and/or
  - food frequency questionnaire/checklist,
    and then compares this information to guidelines for a healthy diet.

# Anthropometric Assessment

**Definition**

Anthropometric assessment is checking to see if a person's body measurements, such as height/length and weight are within a desirable range of values.

**Correct Measurement Techniques**

While working at a WIC site, you may get height and weight measurements from a health care provider that do NOT seem accurate. When this happens, you will need to weigh and measure the person yourself to get correct measurements.

Accurate measurements are important to:

- assess growth of pregnant women, infants, and children, and
- provide participants with appropriate nutrition education.

**Measuring Height**

Measuring **height** is measuring a person when s/he is standing.

To measure height, follow the guidelines on the next pages.

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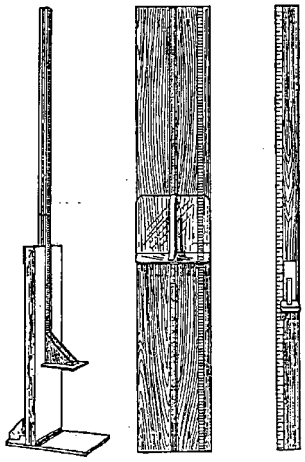
# Anthropometric Assessment (continued)

## Measuring Height

***Use the following equipment:***

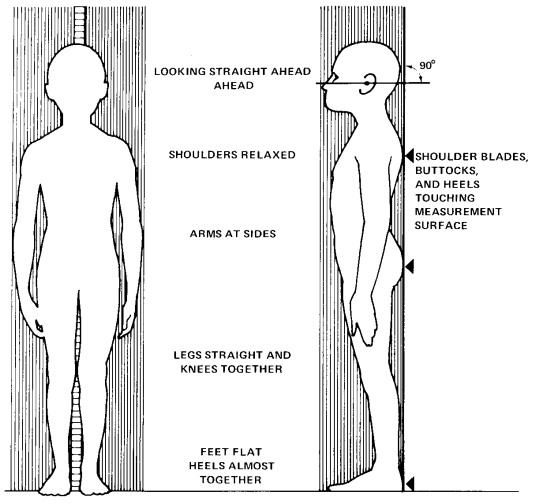
- A measuring board with a 6 inches or wider headboard. See diagram below.
- Do NOT use the measuring rods on platform scales to measure height.



***Have the person (adult or child) being measured do the following:***

1. Remove shoes, hat, and/or heavy outer clothes, such as a coat.

2. Stand tall and straight as in the diagram below.

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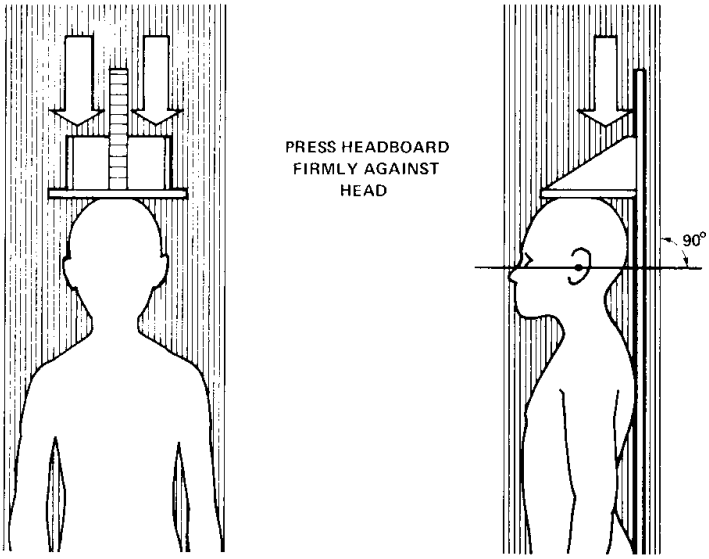
# Anthropometric Assessment (continued)

## Measuring Height (continued)

***Staff person will:***

1. Lower the headboard until it firmly touches the top (crown) of the person's head and creates a right angle with the measurement surface.




2. Read the height (where the bottom of the headboard touches the measuring board) to the nearest:
   - **inch** or **centimeter for adults** and
   - **¼ inch** or **centimeter for children**.

   (You may need to use a short stepladder to read the height if the person is much taller than you are.)

3. Immediately write down the height and any circumstances that might have affected the measurement, such as, "child moved a lot" or "applicant cannot stand for a long time due to neurological condition".

# Anthropometric Assessment (continued)

**Measuring Length**

Measuring **length** is measuring a person when s/he is lying down.

Infants and children **less than 24 months must be measured lying down.**

If a child is between **24 and 36 months** s/he can be **measured either lying down or standing.** (Check to see what your local agency's policy is for measuring children 24 to 36 months of age.)

Once you start measuring and recording a child standing up, you should continue to measure her/him this way.

Note: ISIS assumes children over 24 months old were measured standing up.

To measure length, follow the guidelines on the next pages.

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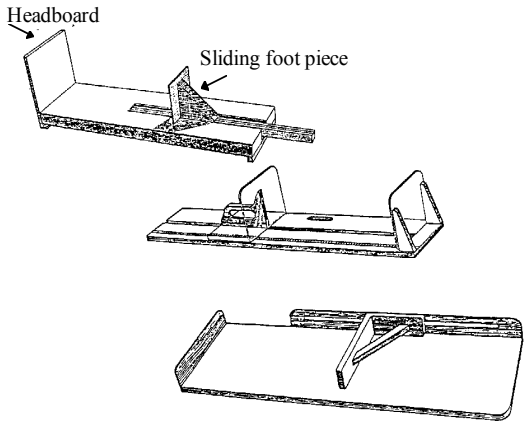
# Anthropometric Assessment (continued)

## Measuring Length

***Use the following equipment:***

- An infant measuring board (See diagram below.)
  - with a fixed head piece and sliding foot piece and
  - smooth edges so that the infant cannot get hurt during measurement.
- Do NOT use a tape measure.




***Have the parent/caregiver of the child do the following:***

1. Take off the child's clothing, including the diaper, if possible. (Diaper bulk can affect the accuracy of measurement.)

2. Lay the child on the disposable paper cloth on the measuring board.

***Staff person and/or another person (usually the parent/caregiver) will do the following:***

<u>One Person (usually the Parent/Caregiver):</u>

1. Hold the crown of the child's head firmly against the immovable headboard.

2. Make sure child is lying flat, straight, and her/his eyes point directly to the ceiling.

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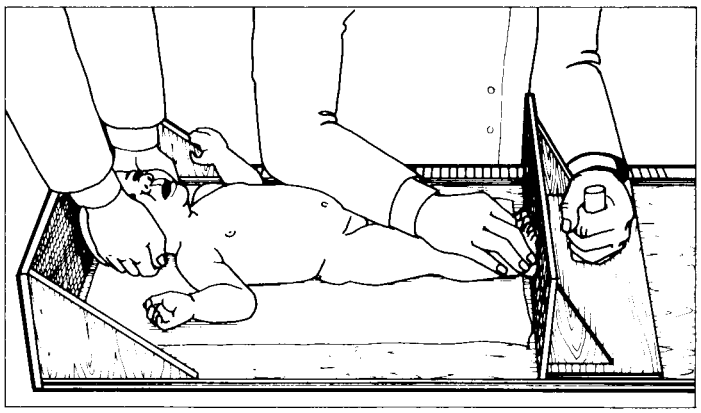
# Anthropometric Assessment (continued)

## Measuring Length



Second Person:

3. Bring the child's knees together and extend legs. Keep a hand on the child's knees to keep her/his legs straight.

4. Move the footboard so it rests firmly against the child's heels.

5. Make sure the child's toes point directly up.

6. Read the length (where the inside of the footboard touches the measuring board) to the nearest **¼ inch** or **centimeter**.

7. Immediately write down the child's length and any circumstances that might have affected the measurement, such as "child moved a lot".

# Anthropometric Assessment (continued)

**Measuring Weight**

Weight is measured:

- standing up for adults and older children,
- sitting down for young children, or
- lying down for infants.

To measure weight, follow the guidelines on the next pages.

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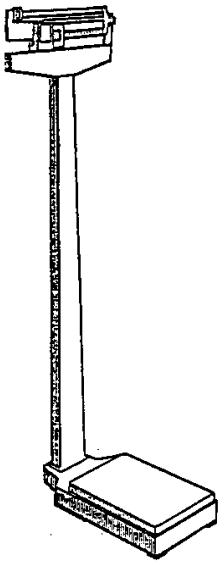
# Anthropometric Assessment (continued)

## Measuring Weight: Standing Up

***Use the following equipment:***

- A beam balance scale
  - with a platform and non-detachable free-sliding weights,
  - marked in increments of not more than four ounces, or 1/4 pound, or 100 grams, and
  - **in balance** (reads "0" when all the weights are moved to the zero position).
- Do NOT use spring balance scales, such as bathroom scales.



***Have the person do the following:***

1. Remove heavy clothing, such as jackets, sweaters, belts, and shoes.

2. Put aside purse, bag, or any items s/he may be carrying.

3. Stand in the center of the platform with arms hanging at her/his sides. See diagram below. She should not touch the wall or the staff person.

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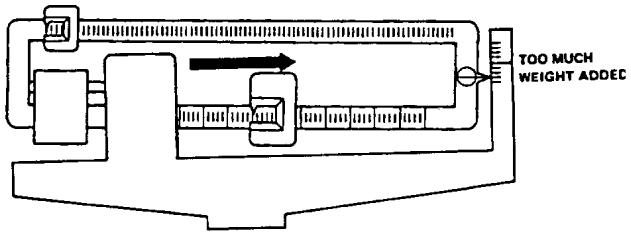
# Anthropometric Assessment (continued)

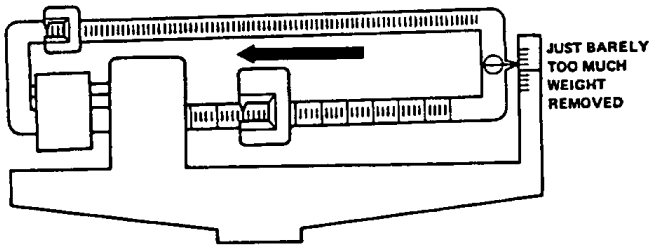
## Measuring Weight: Standing Up (continued)

***Staff person will:***

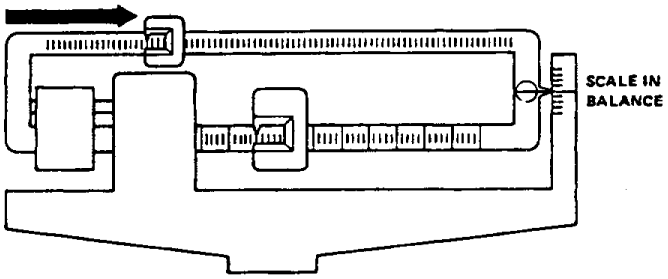
1. Move the large counterbalance weight on the main beam away from the zero position until the indicator drops showing that a little too much weight has been added.




2. Back off to the nearest stop until the indicator rises, showing that a little too much weight has been removed.




3. Repeat this procedure with the fractional beam until the indicator rests in the exact center.

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# Anthropometric Assessment (continued)

## Measuring Weight: Standing Up (continued)

***Staff person will: (continued)***

4. Read the weight to the nearest:
   - **pound** or **kilogram for adults** and
   - **¼ pound** or **kilogram for children**.

5. Immediately write down the person's weight and any circumstances that might have affected the measurement, such as "child had cast on arm".

6. Return the weights to the zero position.

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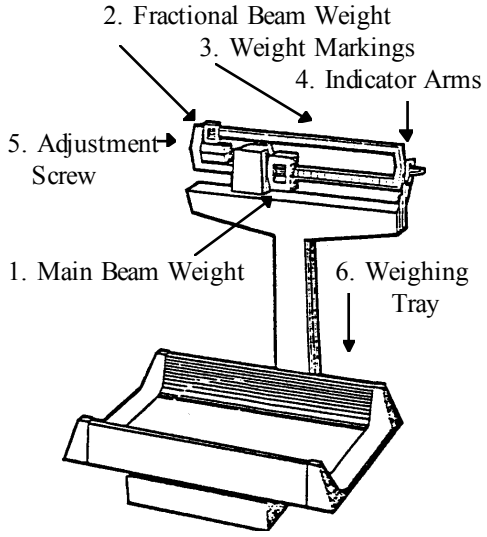
# Anthropometric Assessment (continued)

## Measuring Weight: Lying Down

***Use the following equipment:***

- A beam balance scale (See diagram below.)
  - with a platform and non-detachable free-sliding weights,
  - marked in increments of not more than 4 ounces, or 1/4 pound, or 100 grams,
  - **in balance** (reads "0" when all the weights are moved to the zero position--- if not, turn the adjustment screw until the indicator arm is exactly in the middle), and
  - on a firm and stable table.




***Have the parent/caregiver do the following:***

1. Remove all of the child's clothing, including diaper.
2. Place child in the center of the scale on a clean, disposable paper sheet.
   - in a lying down position if an infant and
   - in a sitting position if an older infant or young child.

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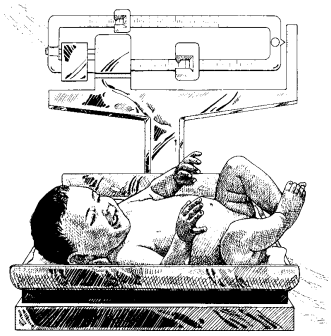
# Anthropometric Assessment (continued)

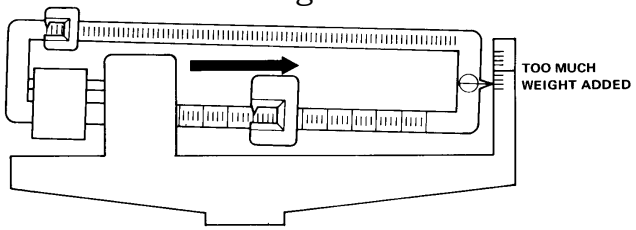
## Measuring Weight: Lying Down (continued)

***Staff person will:***

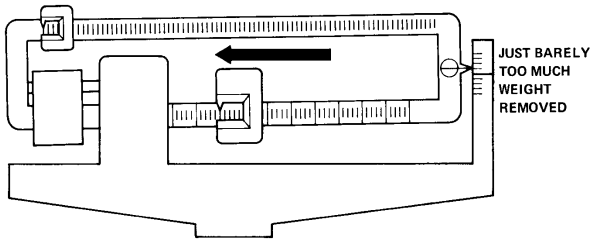
1. Make sure the child's hands are kept inside the weighing tray. Do NOT allow child to hold onto sides of scale or onto a person. (You may want to give the child a lightweight item such as a sticker.)



2. Move the main beam weight to the right, away from the zero position, until the indicator arm drops just a little below the middle. This means that a little too much weight has been added.




3. Move the main beam weight slowly back to the left, toward the zero position, to the nearest stop. The indicator should rise above the middle. This means that a little too much weight has been removed.

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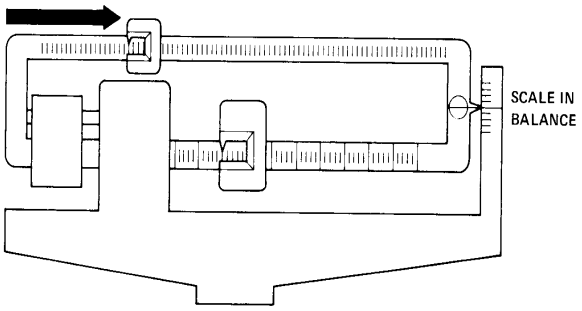
# Anthropometric Assessment (continued)

## Measuring Weight: Lying Down (continued)

4. Move the fractional beam weight to the right, away from the zero, until the indicator arm is exactly in the middle.




5. Read the weight to the nearest **pound and ounce** or **gram**.

6. Immediately write down the measurement and any circumstances that might have affected the measurement, such as “child had on a wet diaper”.

7. Return the weights to the zero position at the left-hand side of the scale and throw the disposable paper sheet away.

# Anthropometric Assessment (continued)

**Measuring Anxious or Uncooperative Children**

Sometimes a child may get anxious and upset during measurements. When this happens, s/he may not cooperate and may refuse to stand or lie down.

**Ways to Calm the Child**

To calm a child, you may want to try the following:

- Be patient and calm.
- Encourage the parent/caregiver to stay calm and to comfort the child, rather than scolding or threatening the child.
- Have the parent help you measure the child.
- If possible, measure another, more cooperative child while the upset child is watching.
- Offer a reward, such as a sticker.
- Wait a few minutes before measuring the child this may help her/him become more relaxed.

**Uncooperative Children**

Sometimes the child will not cooperate at all. If this happens you may:

- Use length for a child who refuses to stand.
- Weigh a child while in the parent's/ caregiver's arms. (Weigh the parent alone and then with the child. Subtract the parent's weight from the combined weight to get the child's weight.)

In these situations always make sure to record what happened.

If the child is impossible to manage do NOT measure the child at all.

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# Anthropometric Assessment (continued)

**Body Mass Index**

Body Mass Index (BMI) is an indicator of nutritional status. BMI is calculated by taking a person's weight and dividing it by her/his height squared.

$$BMI = \frac{Weight}{Height^2}$$

Body Mass Index is used to see whether a person's weight is appropriate for her/his height. It is often used to see if an adult or child is overweight. It is also used to determine the weight gain ranges for pregnant women.

You will NOT need to calculate BMI. When you enter a participant's height and weight into ISIS, ISIS automatically calculates the BMI.

**Percentiles**

Percentiles are a series of curves on growth charts that show the distribution of children with certain body measurements at certain ages.

WIC staff enters age, weight, and height/length information into ISIS to get percentiles. Staff then uses these percentiles to assess an infant's or child's physical growth.

A child usually stays in the same percentile as s/he grows. A child's whose measurements are below the 10th percentile, above the 90th percentile, or suddenly change in percentile may have a nutritional risk.

*continued on next page*

# Anthropometric Assessment (continued)

**Learning Activity 1**

To learn more about how to do anthropometric assessments such as:

- measuring height/length and
- weighing

you may want to try **Learning Activity 1** found at the end of this module.

# Biochemical Assessment

**Definition**

Biochemical assessment is checking to see if a person's blood or urine contains normal levels of certain chemicals or nutrients.

**Blood Levels Tested**

An individual's blood may be tested for:

- iron,
- lead,
- glucose, and
- other nutrients or chemicals.

**Tests for Iron**

There are 2 biochemical assessments used to check for iron deficiency (anemia). These are:

- hemoglobin test and
- hematocrit test.

A hemoglobin (Hgb) test measures the amount of hemoglobin in the blood. (Hemoglobin is the iron-containing molecule that carries oxygen to the cells of the body.) Hemoglobin is measured as grams per deciliter of blood or gm/dl, such as a value of 12 gm/dl.

A hematocrit (Hct) test measures what part of the total blood is made up of red blood cells. Hematocrit is measured as a percentage, such as a value of 36%.

**Lead Test**

A blood lead test gives information about the amount of lead in the person's body. It helps show if the person has lead poisoning.

A child has lead poisoning if s/he has a blood lead level of ≥10mcg/dl.

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# Biochemical Assessment (continued)

**Blood Sugar Test**

A blood sugar test gives information about the person's ability to metabolize sugars. It helps show if the person has diabetes.

**Learning Activity 2**

To learn more about biochemical assessments you may want to try **Learning Activity 2** found at the end of this module.

# Clinical Assessment

**Definition**

Clinical assessment is checking to see if a person has a physical or medical condition that increases her/his risk for developing malnutrition and/or poor health.

**Methods**

Clinical assessment may include assessing a person's:

- health history (such as past pregnancy history for a pregnant woman or chronic infections that require medication for a child),
- current medical condition (such as diabetes, high blood pressure, allergies, or birth defects that affect eating), and
- health/lifestyle habits (such as alcohol, drug, or tobacco use).

**Learning Activity 3**

To learn more about clinical assessments you may want to try **Learning Activity 3** found at the end of this module.

# Dietary Assessment

**Definition**

Dietary assessment is checking to see what food and how much of these foods a person eats and how these compare to dietary recommendations.

**Methods for**

There are several ways to find out what a participant normally eats. These are:

- a 24-hour recall,
- a food record/diary,
- a diet history, or
- a food frequency questionnaire.

**Chart**

The chart on the next page briefly describes each of the dietary intake methods and the benefits and limitations of each.

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# Dietary Assessment (continued)

## Food Intake Methods

| Method | Benefits | Limitations |
|---|---|---|
| **24-Hour Recall/Diet History** is a record of what and how much a person ate or drank during 24 hours.<br><br>May be completed by:<br>• the participant or<br>• a WIC staff person | Takes less time than other methods<br><br>More accurate than estimates of average intakes | May not be a typical day (not useful for a diet that changes a lot)<br><br>Servings may not be accurate<br><br>Person may forget or not write down all foods eaten |
| **Food Record/Diary** is a 2 to 7 day record of eating:<br>• type and amount of food,<br>• time of day food was eaten,<br>• where food was eaten,<br>• person's mood while eating,<br>• people present while person was eating, and<br>• why person ate the food. | More accurate since information is recorded right after eating<br><br>May make person aware of food habits<br><br>Useful for over or underweight, or food allergies | Takes time<br><br>Person may change eating habits while keeping the diary |
| **Food Frequency Questionnaire** is a record of what and how often a person typically eats in a day, week or month.<br><br>May be completed by:<br>• the participant or<br>• a WIC staff person | Gives overview of person's diet<br><br>May identify low or high intake of nutrients<br><br>Useful for double-checking other methods | May be less accurate since nutrient intake may be over- or under-estimated<br><br>Questionnaires do not include all possible foods |

# Dietary Assessment (continued)

**Method Used at WIC**

The 24-hour recall is the dietary intake method most often used in the WIC Program.

**Sample 24-Hour Recall Form**

A sample 24-hour recall form is shown on the next page.

**Guidelines for Using the 24-Hour Recall**

Guidelines for the 24-hour recall are described in the pages following the sample form. Become familiar with these guidelines.

**Dietary Intake Forms**

The California State WIC Program gives local agencies dietary intake forms to evaluate the diets of WIC participants. These forms include:

- the *Women's Dietary Intake*,
- the *Prenatal Nutrition Questionnaire*,
- the *Breastfeeding/Postpartum Woman and Newborn Infant Questionnaire*,
- the *Infant Nutrition Questionnaire*, and
- the *Child Nutrition Questionnaire*.

Find out which dietary intake forms your agency uses.

**Learning Activity 4**

To learn more about dietary assessments you may want to try **Learning Activity 4** found at the end of this module.

**Learning Activity 5**

To learn how anthropometric, biochemical, clinical, and dietary information are used together to assess a participant you may want to try **Learning Activity 5** found at the end of this module.

# Dietary Assessment (continued)

## Sample 24-Hour Recall Form

| Name | Date of Birth | DO NOT WRITE IN THIS SPACE |
|---|---|---|
| | | SUMMARY |

CIRCLE: Pregnant Nonpregnant Breastfeeding

INSTRUCTIONS:
Write down everything you ate and drank in 1 day (24 hours). Include between meal snacks.
Write down the time of day and amounts of each item.

| Time | What you ate and drank and the amounts | Fruits & Vegetables: Vitamin A Rich | Fruits & Vegetables: Vitamin C Rich | Fruits & Vegetables: Other | Breads & Cereals: Whole Grains | Breads & Cereals: Enriched | Milk: Milk Products | Milk: Alternate | Protein: Vegetable | Protein: Animal |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

| Comments & Follow-up | | | Vitamin A Rich | Vitamin C Rich | Other | Whole Grains | Enriched | Milk Products | Alternate | Vegetable | Animal |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Servings Eaten | | | | | | | | | | |
| | Minimum Servings Needed | Pregnant & Breastfeeding | 1 | 1 | 3 | 7 | | 3 | | 3 | |
| | | 25 + Years Nonpregnant | 1 | 1 | 3 | 6 | | 2 | | 2 | |
| | | 11-24 Years Nonpregnant | 1 | 1 | 3 | 7 | | 3 | | 2 | |
| | Difference | | | | | | | | | | |

| Nutrition Goal Chosen | Date | Interviewer | Title |
|---|---|---|---|
| | | | |

# Dietary Assessment (continued)

## Guidelines for Using the 24-Hour Recall Method

### *1. Instructing the Participant:*

- Explain that the information will be used see if the participant's diet meets her/his nutritional needs.

- Have participant write down everything s/he ate and drank yesterday, from the time she got up until she went to bed for the last time:
  - **Amount of food** actually eaten (not what was put in the dish)
  - **Time** food was eaten

- Remind the participant to write down **everything eaten**:
  - Snacks between meals,
  - All drinks, and
  - Items such as butter, jelly, sugar, or salad dressing.

### *2. Checking the Form or Filling Out the Form for the Participant:*

- **Ask open-ended questions**. For example, *"What was the first thing you ate or drank yesterday?"* may be used. Avoid using terms like *breakfast*, *lunch* or *dinner*.

- **Use food models and measuring cups/spoons** to get information about the amounts actually eaten. Do NOT use terms such as *bowl, glass, dish, piece* or *spoonful.*

- Ask how the food was **prepared and/or served**. For example, "*1 chicken drumstick (fried in shortening, no flour)"*

- Ask about the **type** of food and drink. For example, *"2% milk*".

- Ask about the **brand** of food or drink. For example, a participant may say "*orange juice*" when s/he had Hi-C®.

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# Dietary Assessment (continued)

## Guidelines for Using the 24-Hour Recall Method (continued)

### *2. Checking the Form or Filling Out the Form for the Participant (continued):*

- Ask about any **extra foods eaten**, such as bread, tortillas, salad, salad dressing, vegetables, beverages, and desserts. Also ask about snacks and beverages.

- Write down **what is in a mixed food**. For example, for a cheese sandwich you may write, *"2 slices whole wheat bread, 2 ounces American cheese, and 2 teaspoons mayonnaise."*

- **Do NOT express approval or disapproval about the foods eaten**. (People will tell you what they think you want to hear rather than what they actually ate.)

- **Give the participant enough time to answer**. (People are not used to remembering what they ate.)

- **Focus on getting information about the participant's diet.** Do NOT change the subject. Avoid interruptions.

- Ask the participant **if this was a typical day**. For example, *"Was this a normal eating day for you"? "Did you eat more (less) food than usual because of a special occasion (being sick)?"* Note any changes.

### *3. Assessing the Foods Eaten by the Participant:*

- **Identify what group (9 groups) each food belongs to**. For example, "orange juice" belongs to the "Vitamin C-Rich Fruits and Vegetables" group.
- **Determine the number of servings** eaten for the food. For example, 12 ounces of orange juice is 2 servings (since 1 serving of orange juice is 6 ounces).
- **Write in the number of servings** for each food in the column for that food group.

# Dietary Assessment (continued)

## Guidelines for Using the 24-Hour Recall Method (continued)

### *3. Assessing the Foods Eaten by the Participant (continued):*

- Write down the **total number of servings eaten from each food group** at the bottom of each column in the "Servings Eaten" or "Total" section of the form.

- **Compare the totals to the "Minimum Servings Needed"** for the category of the participant. The difference between servings needed and servings eaten can be filled in. If the participant ate more than the minimum servings needed the difference will be a *plus* number. If s/he ate fewer than the minimum servings needed it will be a *minus* number. If the participant had exactly what is recommended, the difference will be zero. (See example below.)

- **Show the participant the differences between the suggested number of servings and the number actually eaten**.

- **Write** down any comments, such as:
  - cultural beliefs that may affect diet,
  - current situations that may affect food intake (such as homelessness, going through a divorce, having a serious medical problem),
  - vegetarianism, and/or
  - deficiencies in the diet.

# Common Conditions Affecting Nutrition/ Health Status

**Conditions May Affect Nutrition/ Health Status**

When assessing an applicant/participant, you may identify a physical or medical condition that can increase the person's risk for poor nutrition and/or health.

**Chart**

The chart on the next pages describes some common conditions identified at WIC and possible suggestions to address them.

Note: These conditions are also explained in the *Indicators of Nutritional Need* section of the categorical modules:

- *Module D: Prenatal Nutrition,*
- *Module E: Postpartum Nutrition,*
- *Module F: Infant Nutrition, and*
- *Module G: Child Nutrition.*

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# Common Conditions Affecting Nutrition/ Health Status (continued)

## Nutrition/Health Conditions & Suggestions

| Condition/Description | Suggestions |
|---|---|
| **Anemia** is a condition in which there are low iron levels in the blood. Symptoms may include:<br>• poor appetite,<br>• tiredness,<br>• weakness,<br>• developmental delays,<br>• learning problems, and<br>• growth retardation. | • Eat iron-rich foods (such as meats, spinach, dried beans, and iron-fortified cereals for infants).<br>• Eat iron-rich foods along with Vitamin C-rich foods (such as orange juice, tomatoes, and broccoli). Vitamin C helps the body with iron absorption.<br>• Cook foods in cast iron cookware.<br>• Do NOT drink tea or coffee when eating iron-rich foods. They block iron absorption. |
| **Domestic Violence** includes the following abuse:<br>• verbal (insults, belittling)<br>• emotional (threats, extreme jealousy, isolating behavior)<br>• economic (preventing partner from working or having access to money)<br>• sexual (forced sex) or<br>• physical (hitting, kicking, biting, beating, using weapons)<br><br>Signs of physical abuse may include bruises, cuts, rashes, burns, limps, unusual movements, or wearing clothing or glasses that hide signs. | • Refer participant to shelter for victims of domestic violence.<br><br>In California, 1 out of every 3 women every year is a victim of domestic violence. (20-80% of women on WIC report that they have experienced domestic violence.)<br><br>**Most victims of domestic violence show no** signs of abuse. |

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# Common Conditions Affecting Nutrition/ Health Status (continued)

## Nutrition/Health Conditions & Suggestions (continued)

| Condition/Description | Suggestions |
|---|---|
| **Drug Abuse** is the misuse of illegal and over-the-counter drugs and alcohol. It can result in babies with:<br>• low birth weight,<br>• Fetal Alcohol Syndrome, and<br>• Central Nervous System (CNS) problems. | Refer participant to:<br>• local substance abuse programs, and/or<br>• support groups to assist them with options for recovery. |
| **Homelessness** Homeless people often do not get regular and/or nutritious meals. | Refer participant to:<br>• local shelters and/or<br>• agencies that help with housing. |
| **Lead Poisoning** is the ingestion or inhaling of toxic levels of lead resulting in a blood lead level ≥10mcg/dl. Symptoms may include:<br>• reduced appetite,<br>• stomach ache,<br>• vomiting,<br>• tiredness,<br>• sleepiness,<br>• speech problems, and<br>• clumsiness. | • Do NOT:<br>➢ put cribs, high chairs, or beds near peeling or chipping paint,<br>➢ sand, burn or scrape paint that may contain lead,<br>➢ use home remedies or cosmetics that contain lead,<br>➢ use hand-made or imported dishes for food, and/or<br>➢ store food in bags turned inside out (the writing on these bags may contain lead).<br>• Do:<br>➢ Eat calcium-, iron-, and protein-rich foods and avoid fatty foods.<br>➢ Wash hands before eating.<br>➢ Wash floors often.<br>➢ Take shoes off when entering the house. |

*continued on next page*

# Common Conditions Affecting Nutrition/ Health Status (continued)

## Nutrition/Health Conditions & Suggestions (continued)

| Condition/Description | Suggestions |
|---|---|
| **Overweight** (>90th percentile weight for height for children or BMI>26.0 for adults) may be due to:<br>• overeating,<br>• lack of exercise,<br>• social and/or emotional factors,<br>• slower than normal metabolism, and/or<br>• **genetics.**<br><br>Obesity may cause or complicate diseases, such as diabetes and heart disease. | • Dieting is NOT recommended if pregnant.<br>• Eat a nutritious diet. (Use Food Guide Pyramid.)<br>• Drink water for thirst.<br>• If eating "fast foods", choose low-fat foods and limit quantities.<br>• Be active. |
| **Smoking**<br><br>In pregnant women, smoking can result in:<br>• miscarriage,<br>• premature birth,<br>• increased risk of infant death in the 1st year,<br>• slowed fetal growth,<br>• low birth weight, and/or<br>• problems during delivery.<br><br>Smoking and second hand smoke can also cause breathing problems and cancer. | • Refer participant to local smoking cessation programs.<br>• Encourage the participant to:<br>➢ Cut down the number of cigarettes smoked each day.<br>➢ Take fewer puffs on each cigarette.<br>➢ Eat low-calorie, nutritious snacks instead of smoking.<br>➢ Get support from family and friends. |

# Nutrition Intervention Triage System

**Nutrition Intervention Triage System**

The Nutrition Intervention Triage System was developed by the California WIC Branch to address the many nutrition or health problems applicants/participants may experience. In this system each nutrition/health problem is assigned an intervention level ranging from 1 to 4. (As the number for the level increases, the level of professional expertise and technical skill needed to serve the participant increases.)

**Chart of Levels of Intervention**

A list of the services provided and staff providing these services for each level of the system are described in the chart on the next page.

**WIC Nutrition Assistants (WNAs) provide Level 1 and 2 interventions.**

*continued on next page*

# Nutrition Intervention Triage System (continued)

## Levels of Intervention

| Level | Services Offered | WIC Staff |
|---|---|---|
| 1 | • routine WIC services (limited assessment and nutrition education) | WIC Nutrition Assistant (WNA) |
| 2 | • routine WIC services<br>• additional nutrition education | WIC Nutrition Assistant (WNA) |
| 3 | • assessment<br>• nutrition education<br>• individual nutrition education plan | WIC Registered Dietitian (RD) |
| 4 | • assessment and monitoring<br>• making and tracking of referrals<br>• modification of the WIC food package where needed<br>• reinforcement of medical nutrition therapy (MNT) care plan | WIC Registered Dietitian (RD) |

# Indicators of Nutritional Need

**Nutritional Need**

A nutritional need is a health problem or condition that puts a person at nutritional risk. Nutritional needs are grouped into 4 categories:

- anthropometric,
- biochemical,
- clinical, and
- dietary.

**Indicators of Nutritional Need**

An indicator of nutritional need is information about a person's body measurements, blood or urine levels, health history, medical condition, living situation, or eating behaviors that shows s/he is at nutritional risk.

When you assess an applicant or participant you may identify an anthropometric, biochemical, clinical, or dietary indicator of nutritional need.

**Charts**

The WIC Branch has developed charts listing indicators of nutritional need and their corresponding ISIS codes and levels of nutrition intervention for each participant category. These charts are found in the categorical modules:

- *Module D: Prenatal Nutrition,*
- *Module E: Postpartum Nutrition,*
- *Module F: Infant Nutrition,* and
- *Module G: Child Nutrition.*

# Summary

**Asessment**

Assessment is the evaluation of the WIC participant's nutrition or health status.

There are 4 different types of assessments used to determine nutritional risk. They are:

- anthropometric,
- biochemical,
- clinical, and
- dietary.

**Methods for Gathering Data**

The chart below lists methods for gathering anthropometric, biochemical, clinical, and dietary data.

| Type of Data | Methods |
|---|---|
| **Anthropometric** | • weighing<br>• measuring length<br>• measuring height |
| **Biochemical** | • taking a blood sample |
| **Clinical** | • referrals<br>• forms<br>• interviews<br>• observations |
| **Dietary** | • a 24-hour recall/diet history<br>• a food record/diary<br>• a food frequency questionnaire/checklist |

*continued on next page*

# Summary (continued)

| | |
|---|---|
| **Anthropometric Assessment** | Anthropometric assessment is checking to see if a person's body measurements such as height/length and weight are within a desirable range of values. |
| **Correct Measurement** | Correct measurements of height, length, and weight are important in:<br>• assessing growth of pregnant women, infants, and children, and<br>• providing appropriate nutrition education. |
| **Body Mass Index** | Body Mass Index (BMI) is weight/(height)$^2$. It is used to see if a person's weight is appropriate for her/his height. |
| **Percentiles** | Percentiles are a series of curves on growth charts that show the distribution of children with certain body measurements at certain ages. They are used to assess physical growth. |
| **Biochemical Assessment** | Biochemical assessment is checking to see if a person's blood or urine contains normal levels of certain chemicals or nutrients. |
| **Clinical Assessment** | Clinical assessment is checking to see if a person has a physical or medical condition that increases her/his risk for developing malnutrition and/or poor health. |
| **Dietary Assessment** | Dietary assessment is checking to see what food and how much of these foods a person eats and how these compare to dietary recommendations. |

*continued on next page*

# Summary (continued)

**Dietary Intake Methods**

There are several ways to find out what a participant typically eats. These are:

- a 24-hour recall/diet history,
- a food record/diary, or
- a food frequency questionnaire.

The 24-hour recall is the method most often used at WIC sites.

**Conditions Affecting Health/ Nutrition Status**

Physical or medical conditions may affect a person's health/nutrition status. Common conditions include:

- anemia,
- domestic violence,
- drug abuse,
- homelessness,
- lead poisoning,
- overweight, and
- smoking.

**Nutrition Intervention Triage System**

The Nutrition Intervention Triage System is a system in which nutrition/health problems are assigned an intervention level of 1, 2, 3, or 4.

**Indicators of Nutritional Need**

An indicator of nutritional need is information about a person, such as body measurements, blood or urine levels, health history, medical condition, living situation, or eating behaviors, that shows s/he is at nutritional risk.

# Glossary

anemia- Anemia is a medical condition in which there are not enough red blood cells to carry needed oxygen to the cells of the body.

anthropometric assessment- Anthropometric assessment is checking to see if a person's body measurements (usually height/length and weight) are at desirable values.

assessment- Assessment is the evaluation of the WIC participant's nutrition or health status.

biochemical assessment-Biochemical assessment is checking to see if a person's blood or urine contains normal levels of certain chemicals or nutrients.

Body Mass Index- Body Mass Index (BMI) is an indicator of nutritional status that is calculated by taking a person's weight and dividing it by her/his height squared. (BMI = Weight/(Height)$^2$ )

clinical assessment- Clinical assessment is checking to see if a person has a physical, medical, or living condition that increases her/his risk for developing malnutrition and/or poor health.

diabetes- Diabetes is a medical condition in which the body has problems metabolizing glucose (blood sugar).

dietary assessment- Dietary assessment is checking to see what foods and how much of these foods a person eats and comparing this intake to dietary recommendations.

diet history- A diet history is a record of what a person eats and drinks on a typical day.

food frequency questionnaire- A food frequency questionnaire is a record of what and how often a person typically eats in a day, week or month.

food record/diary- A food record/diary is a 2-7 day record of eating information such as the type and amount of food a person has eaten, the time of day the food was eaten, where the food was eaten, the person's mood while eating, the people present while the person was eating, and why the person ate the food.

# Glossary (continued)

glucose- Glucose is a simple sugar used by the body for energy.

hemoglobin test- A hemoglobin (Hgb) test measures the amount of hemoglobin in the blood. (Hemoglobin is measured as grams per deciliter of blood or gm/dl, such as a value of 12 gm/dl.)

hematocrit test- A hematocrit (Hct) test measures what part of the total blood is made up of red blood cells. (Hematocrit is measured as a percentage.)

indicator of nutritional need- An indicator of nutritional need is information about a person's body measurements, blood or urine levels, health history, medical condition, living situation, or eating behaviors.

Nutrition Intervention Triage System- The Nutrition Intervention Triage System is a system used by local agencies where each nutrition/health problem is assigned an intervention level ranging from 1 to 4.

nutritional need- A nutritional need is a health problem or condition that puts a person at nutritional risk.

24-hour recall- A 24-hour recall is a record of what and how much a person ate or drank during 24 hours.

# Progress Check

1. Match each type of assessment to its description.

| Assessment | Description |
|---|---|
| _____ Anthropometric | A. Evaluates a person's food intake. |
| _____ Biochemical | B. Evaluates a person's health history, current medical condition, and health/lifestyle habits. |
| _____ Clinical | C. Measures what is in a person's blood or urine. |
| _____ Dietary | D. Measures a person's body by taking measurements such as height, weight, and head circumference. |

2. For each of the methods listed write the type of data ("A" for anthropometric, "B" for biochemical, "C" for clinical, and "D" for dietary) that is gathered using the method.

_____ 24-hour recall

_____ hemoglobin test

_____ interview of person regarding cigarette-smoking habits

_____ diet history

_____ weight

# Progress Check (continued)

3. Mark the following ***TRUE*** or ***FALSE***.

_____ At WIC a tape measure may be used to measure length or height.

_____ When measuring height make sure the person being measured keeps her/his shoes on.

_____ When measuring height/length the person being measured should be standing up straight or lying down flat.

_____ When measuring for height/length repeat measurements until 2 measurements agree within ¼ inch.

_____ A beam balance scale, not a spring balance scale (such as a bathroom scale) should be used for weighing.

_____ Adults being weighed should remove heavy outer clothing.

_____ A baby should always be weighed with her/his clothing and diaper.

_____ A child may hold on to her/his mother if s/he is being weighed standing up.

_____ An uncooperative child may be weighed while in the parent's/caregiver's arms.

_____ The Nutrition Intervention Triage System assigns one of 10 levels to each nutrition/health problem.

4. List 3 methods to assess dietary intake.

# Progress Check (continued)

5. List at least 3 common physical or medical conditions that can affect a person's nutrition or health status.

6. Using the Nutrition Intervention Triage System, match the level of intervention with its description.

| **Level of Intervention** | | **Description** |
|---|---|---|
| ____ | 1 | A. Assessment, nutrition education, including an individual nutrition education plan provided by a Registered Dietitian (RD) |
| ____ | 2 | B. Assessment, monitoring, referrals, modification of food package, reinforcement of medical nutrition therapy (MNT) care plan provided by a Registered Dietitian (RD) |
| ____ | 3 | C. Routine WIC services and some additional nutrition education provided by WIC Nutrition Assistant (WNA) |
| ____ | 4 | D. Routine WIC services provided by WIC Nutrition Assistant (WNA) |

# Learning Activities

The following activities are included and are recommended for interactive learning:

- Learning Activity 1: Anthropometric Assessments
- Learning Activity 2: Biochemical Assessments
- Learning Activity 3: Clinical Assesments
- Learning Activity 4: Dietary Assessments
- Learning Activity 5: Identifying the A, B, C, D's

# Activity 1: Anthropometric Assessments

**Learning Objectives**

After completing this activity the Nutrition Assistant will be able to:

- measure a participant's height/length, and
- weigh a participant.

**Instructions**

1. Observe a co-worker adjusting a scale so it balances at "0".

2. Observe a co-worker weigh and measure height/length for:
   - an infant,
   - child, and
   - a woman.

3. Using the guidelines for correct measurement described in this module, weigh and measure the height of several co-workers.

   For weight, repeat measuring until 2 readings agree within 1/4 pound or 100 grams of each other.

   For height, repeat measuring until 2 measurements agree within 1/4 inch of each other.

4. Once you feel comfortable measuring an adult, weigh and measure the height/length of:
   - an infant, and
   - a child.

*continued on next page*

# Activity 1: Anthropometric Assessments (continued)

**Instructions (continued)**

4. (continued)
   For weights lying down, repeat until 2 readings agree within 1/2 ounce or 10 grams of each other.

5. Have your mentor or supervisor observe your technique.

# Activity 2: Biochemical Assessments

**Learning Objectives**

After completing this activity the Nutrition Assistant will be able to:

- describe how laboratory information such as hemoglobin (Hgb) and hematocrit (Hct) test results are entered into ISIS and
- describe what hemoglobin or hematocrit values require a referral to a dietitian.

**Background**

You will get an individual's blood test results from a health care provider form. You enter these results into ISIS.

- To enter **hemoglobin** values, enter the value you see written on the form. For example:
  - 11 gm/dl is entered as "11"
  - 11.3 gm/dl is entered as "11.3"

- To enter **hematocrit** values **drop the tenths**. For example:
  - 33.8% is entered as "33" *(drop the ".8"),*
  - 33.5% is entered as "33" *(drop the ".5"),*
  - 33.2% is entered as "33" *(drop the ".2").*

- Refer the participant to a dietitian when:
  - Hemoglobin is <10.0 gm/dl or
  - Hematocrit is <30.0%.

*continued on next page*

# Activity 2: Biochemical Assessments (continued)

**Instructions**

1. Complete the worksheet on the next page. For each hemoglobin or hematocrit value given:
   - write down the number you would enter into ISIS and
   - mark if the participant will need to be referred to a dietitian.

2. Observe a co-worker enter hemoglobin and/or hematocrit test results into ISIS.

3. Write down any notes on the form on the next page.

4. Talk with your mentor or supervisor if you have any questions regarding the process.

# Activity 2: Biochemical Assessments

## Hemoglobin & Hematocrit Worksheet

| Value on Form: | Value Entered in ISIS: | Referral to Dietitian? (√) |
|---|---|---|
| **Hemoglobin** | | |
| *11.0 gm/dl* | | |
| *11 gm/dl* | | |
| *9.8 gm/dl* | | |
| *10.4 gm/dl* | | |
| *12 gm/dl* | | |
| **Hematocrit** | | |
| *29.5%* | | |
| *36.2%* | | |
| *31.9%* | | |
| *32.6%* | | |
| *31%* | | |

***Notes on Biochemical Assessment:***

# Activity 3: Clinical Assessments

**Learning Objectives**

After completing this activity the Nutrition Assistant will be able to:

- identify some conditions that may put a participant at risk.

**Background**

You may be able to determine if an applicant/ participant may be at risk for health problems by looking at her/his:

- health history,
- current medical condition, and/or
- health/lifestyle habits (such as alcohol, drug, or tobacco use).

**Instructions**

Activity 3a:

1. Observe a WIC staff person as s/he uses the participant's medical referral forms for information about the participant.

2. Write down your notes on the next page (Activity 3a).

Activity 3b:

1. Read each of the case studies described.

2. For each individual, identify her/his clinical indicator (condition or problem).

3. Write down the condition(s)/problem(s) for each individual to the right of each description.

4. Discuss you findings with your mentor or supervisor.

# Activity 3a: Clinical Assessments

**Notes of Observations *Regarding Use of Medical Referral Forms*:**

# Activity 3b: Clinical Assessments

| Description of Applicant/Participant: | Condition(s)/ Problem(s): |
|---|---|
| **David Chang:**<br>• is 2 years old<br>• was breastfed for the first year of his life<br>• has a hematocrit of 34%<br>• has a blood lead level of 10 mcg/dl<br>• eats some solid foods | |
| **Roberta Juarez:**<br>• is 19 years old<br>• is pregnant<br>• is homeless<br>• has a hemoglobin of 12.2 gm/dl<br>• smokes about 10 cigarettes/day<br>• eats mainly beans and rice for dinner | |
| **Tina Woods:**<br>• is 22 years old<br>• breastfeeds her 2 month-old daughter<br>• has a hemoglobin of 13.2 gm/dl<br>• has a boyfriend who does not allow her to see any of her friends or family members<br>• eats at fast-food restaurants a lot | |
| **Tommy Cole:**<br>• is 4 years old<br>• is overweight<br>• has a hematocrit of 34%<br>• drinks 2-3 cans of soda/day<br>• has lost 2 teeth due to tooth decay | |

# Activity 4: Dietary Assessments

**Learning Objectives**

After completing this activity the Nutrition Assistant will be able to:

- assess dietary intake using the 24-hour recall and the *Food Guide Pyramid*.

**Instructions**

1. Using the blank 24-hour recall form on the next page, write down everything you ate and drank yesterday.
2. Fill in the number of servings for the appropriate food groups.
3. Compare your intake with the recommended servings of the *Food Guide Pyramid*.
4. Ask a friend or co-worker to write down everything s/he ate and drank yesterday.
5. Fill in the number of servings for the appropriate food groups.
6. Compare the friend's/co-worker's intake to the recommended servings of the *Food Guide Pyramid.*
7. Have your mentor or supervisor review your assessments.
8. Discuss what you learned with your mentor or supervisor.

# Activity 4: Dietary Assessments

| Name | Date of Birth | DO NOT WRITE IN THIS SPACE |
|---|---|---|

**SUMMARY**

CIRCLE: Pregnant Nonpregnant Breastfeeding

INSTRUCTIONS:
Write down everything you ate and drank in 1 day (24 hours). Include between meal snacks. Write down the time of day and amounts of each item.

| | | Fruits & Vegetables | | | Breads & Cereals | | Milk | | Protein | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | What you ate and drank and the amounts | Vitamin A Rich | Vitamin C Rich | Other | Whole Grains | Enriched | Milk Products | Alternate | Vegetable | Animal |
| | | | | | | | | | | |
| **Comments & Follow-up** | **Servings Eaten** | | | | | | | | | |
| | Minimum Servings Needed: Pregnant & Breastfeeding | 1 | 1 | 3 | 7 | | 3 | | 3 | |
| | Minimum Servings Needed: 25 + Years Nonpregnant | 1 | 1 | 3 | 6 | | 2 | | 2 | |
| | Minimum Servings Needed: 11-24 Years Nonpregnant | 1 | 1 | 3 | 7 | | 3 | | 2 | |
| | **Difference** | | | | | | | | | |

| **Nutrition Goal Chosen** | Date | Interviewer | Title |
|---|---|---|---|

# Activity 4: Dietary Assessments

| Name | Date of Birth | DO NOT WRITE IN THIS SPACE |
|---|---|---|
| | | SUMMARY |

CIRCLE: Pregnant Nonpregnant Breastfeeding

INSTRUCTIONS:
Write down everything you ate and drank in 1 day (24 hours). Include between meal snacks.
Write down the time of day and amounts of each item.

| | | Fruits & Vegetables | | | Breads & Cereals | | Milk | | Protein | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | What you ate and drank and the amounts | Vitamin A Rich | Vitamin C Rich | Other | Whole Grains | Enriched | Milk Products | Alternate | Vegetable | Animal |
| | | | | | | | | | | |
| **Comments & Follow-up** | | **Servings Eaten** | | | | | | | | |
| | Minimum Servings Needed: Pregnant & Breastfeeding | 1 | 1 | 3 | 7 | | 3 | | 3 | |
| | Minimum Servings Needed: 25 + Years Nonpregnant | 1 | 1 | 3 | 6 | | 2 | | 2 | |
| | Minimum Servings Needed: 11-24 Years Nonpregnant | 1 | 1 | 3 | 7 | | 3 | | 2 | |
| | **Difference** | | | | | | | | | |

| **Nutrition Goal Chosen** | Date | Interviewer | Title |
|---|---|---|---|
| | | | |

# Activity 4: Dietary Assessments

| Name | Date of Birth | DO NOT WRITE IN THIS SPACE |
|---|---|---|
| | | SUMMARY |

CIRCLE: Pregnant Nonpregnant Breastfeeding

INSTRUCTIONS:
Write down everything you ate and drank in 1 day (24 hours). Include between meal snacks. Write down the time of day and amounts of each item.

| | | Fruits & Vegetables | | | Breads & Cereals | | Milk | | Protein | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | What you ate and drank and the amounts | Vitamin A Rich | Vitamin C Rich | Other | Whole Grains | Enriched | Milk Products | Alternate | Vegetable | Animal |
| | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Comments & Follow-up** | **Servings Eaten** | | | | | | | | | |
| | Minimum Servings Needed | Pregnant & Breastfeeding | 1 | 1 | 3 | 7 | | 3 | | 3 |
| | | 25 + Years Nonpregnant | 1 | 1 | 3 | 6 | | 2 | | 2 |
| | | 11-24 Years Nonpregnant | 1 | 1 | 3 | 7 | | 3 | | 2 |
| | **Difference** | | | | | | | | | |

| **Nutrition Goal Chosen** | Date | Interviewer | Title |
|---|---|---|---|
| | | | |

# Activity 5: Identifying the A, B, C, D's

**Learning Objectives**

After completing this activity the Nutrition Assistant will be able to:

- identify anthropometric, biochemical, clinical, and dietary indicators for 5 case studies.

**Instructions**

1. Ask your mentor or supervisor for copies of the *Indicators of Nutritional Need* charts. (These charts may also be found in the categorical modules: *Module D: Prenatal Nutrition, Module E: Postpartum Nutrition, Module F: Infant Nutrition,* and *Module G: Child Nutrition.)*
2. Read each of the case studies on the following pages.
3. Using the *Indicators of Nutritional Need* charts, identify the anthropometric, biochemical, clinical, and dietary indicators of nutritional need for each case study.
4. Write down the indicators of nutritional need on the form.
5. For those case studies that require a referral to a Registered Dietitian write in *"Referral to RD needed."*
6. Discuss what you learned and any questions you may have with your mentor or supervisor.

# Activity 5: Identifying the A, B, C, D's

## Case Study 1:

Selena Hernandez is a 19-year-old pregnant woman. The following information describes her:

- This is her first pregnancy. She is 15 weeks pregnant.
- Before she became pregnant her BMI was 27.0.
- Her Hct is 31.6%.
- She is currently living in a homeless shelter.
- Her 24-hour recall listed the following foods:
  - 2 slices white toast
  - 12 ounces Tang® orange drink
  - 1 cup cooked rice
  - 1 cup pinto beans cooked with 2 Tablespoons lard
  - 3 tortillas
  - 1 12 ounce can Pepsi®
  - 1 small bag potato chips
  - 2 cheeseburgers
  - 1 cup vanilla ice cream

**Anthropometric Indicator(s):**

**Biochemical Indicator(s):**

**Clinical Indicator(s):**

**Dietary Indicator(s):**

# Activity 5: Identifying the A, B, C, D's

## Case Study 2:

Sarah Jones is 28 years old. The following information describes her:

- She is breastfeeding her 2 month-old son.
- She is 5 feet, 6 inches tall.
- She weighs 130 pounds.
- She smokes 10 cigarettes/day.
- Her Hgb is 10.8 gm/dl.
- Her 24-hour recall listed the following foods:
  - 2 cups coffee
  - 1 slice chocolate cake with frosting (about 2 inches by 2 inches)
  - 1 small bag french fries
  - 1 12 ounce can diet Pepsi®
  - 1 small green salad (lettuce,1 carrot, ½ tomato with 2 Tablespoons ranch dressing)
  - 1 chicken breast
  - 1 baked potato with 2 Tablespoons butter
  - 1 glass of wine

**Anthropometric Indicator(s):**

**Biochemical Indicator(s):**

**Clinical Indicator(s):**

**Dietary Indicator(s):**

## Activity 5: Identifying the A, B, C, D's

### Case Study 3:

Jordan Heller is 3 months old. The following information describes him:

- He lives in a migrant farmworker camp with his mother, father, and 3 sisters.
- He is overweight (at the 91st percentile weight for length)
- His Hgb is 10.6 gm/dl
- He is being fed formula. He takes in about 30 ounces a day.
- His mother often adds rice cereal to his bottle.

**Anthropometric Indicator(s):**

**Biochemical Indicator(s):**

**Clinical Indicator(s):**

**Dietary Indicator(s):**

# Activity 5: Identifying the A, B, C, D's

## Case Study 4:

Susan Chu is a 25-year-old pregnant woman. The following information describes her:

- She is 9 weeks pregnant.
- This is her second pregnancy. Her first child had a birth weight of 9 pounds.
- She is 5 feet, 5 inches tall.
- She weighed 120 pounds before she became pregnant.
- She now weighs 115 pounds.
- Her Hct is 31.6%
- Her 24-hour recall listed the following foods:
  - 6 ounces orange juice
  - 1 cup cooked rice
  - stir fried vegetables (bok choy and pea pods) with tofu (8 ounces)
  - 1 fried egg
  - 1 cup rice noodles
  - 1 tangerine

**Anthropometric Indicator(s):**

**Biochemical Indicator(s):**

**Clinical Indicator(s):**

**Dietary Indicator(s):**

# Activity 5: Identifying the A, B, C, D's

## Case Study 5:

Tommy Jenkins is 4 years old. The following information describes him:

- His weight for height is greater than 98%.
- His Hct is 32.2%
- He has Down's Syndrome.
- He has severe tooth decay and has lost several teeth.
- He drinks from a bottle.
- His 24-hour recall listed the following foods:
  - 1 cup oatmeal
  - 4 bottles (8 ounce) of whole milk
  - 1 banana
  - 2 bags of french fries
  - 12 ounces of apple juice
  - 1 cup of vanilla ice cream

**Anthropometric Indicator(s):**

**Biochemical Indicator(s):**

**Clinical Indicator(s):**

**Dietary Indicator(s):**

# Progress Check Answers

1. Match each type of assessment to its description.

| | Assessment | Description |
|---|---|---|
| ***D*** | Anthropometric | A. Evaluates a person's food intake. |
| ***C*** | Biochemical | B. Evaluates a person's health history, current medical condition, and health/lifestyle habits. |
| ***B*** | Clinical | E. Measures what is in a person's blood or urine. |
| ***A*** | Dietary | F. Measures a person's body by taking measurements such as height, weight, and head circumference. |

2. For each of the methods listed write the type of data ("A" for anthropometric, "B" for biochemical, "C" for clinical, and "D" for dietary) that is gathered using the method.

___***D***___ 24-hour recall

___***B***___ blood hemoglobin test

___***C***___ interview of person regarding cigarette smoking habits

___***D***___ diet history

___***A***___ weight

# Progress Check Answers (continued)

3. Mark the following ***TRUE*** or ***FALSE***.

***FALSE*** At WIC a tape measure may be used to measure length or height.

***FALSE*** When measuring height make sure the person being measured keeps her/his shoes on.

***TRUE*** When measuring height/length the person being measured should be standing up straight or lying down flat.

***TRUE*** When measuring for height/length repeat measurements until 2 measurements agree within ¼ inch.

***TRUE*** A beam balance scale, not a spring balance scale (such as a bathroom scale) should be used for weighing.

***TRUE*** Adults being weighed should remove heavy outer clothing.

***FALSE*** A baby should always be weighed with her/his clothing and diaper.

***FALSE*** A child may hold on to her/his mother if s/he is being weighed standing up.

***TRUE*** An uncooperative child may be weighed while in the parent's/caregiver's arms.

***FALSE*** The Nutrition Intervention Triage System assigns one of 10 levels to each nutrition/health problem.

4. List 3 methods to assess dietary intake.
   - ***24-hour recall/diet history,***
   - ***food record/diary, and***
   - ***food frequency questionnaire.***

# Progress Check Answers (continued)

5. List at least 3 common physical or medical conditions that can affect a person's nutrition or health status.
   ***Any 3 of the following are correct:***
   - ***anemia,***
   - ***domestic violence,***
   - ***drug abuse,***
   - ***homelessness,***
   - ***lead poisoning,***
   - ***overweight, or***
   - ***smoking.***

6. Using the Nutrition Intervention Triage System, match the level of intervention with its description.

| **Level of Intervention** | | **Description** |
|---|---|---|
| ***D*** | 1 | A. Assessment, nutrition education, including an individual nutrition education plan provided by a Registered Dietitian (RD) |
| ***C*** | 2 | B. Assessment, monitoring, referrals, modification of food package, reinforcement of medical nutrition therapy (MNT) care plan provided by a Registered Dietitian (RD) |
| ***A*** | 3 | E. Routine WIC services and some additional nutrition education provided by WIC Nutrition Assistant (WNA) |
| ***B*** | 4 | F. Routine WIC services provided by WIC Nutrition Assistant (WNA) |